What is claimed is:

1. A method of creating a pattern in a layer of opaque material of a photolithographic exposure mask, comprising:

defining an etch recipe for etching a product pattern A in an opaque material over a substrate of a photolithographic exposure mask that optimally meets Critical Diameter (CD) requirements of the product pattern, said etching a product pattern comprising a photoresist exposure mask;

calculating the product pattern total Cr etch loading on the exposure mask;

defining a residual or useless surface area of the exposure mask;

if the defined, optimum etch recipe meets the optimal Critical Diameter (CD) requirements, the exposure of the opaque material of the exposure mask is performed;

if the defined, optimum etch recipe does not meet the optimal Critical Diameter (CD) requirements, then the Cr etch loading is modified by adding dummy patterns in unused areas of the photoresist exposure mask;

if the addition of dummy pattern to the product pattern does not meet the Cr etch loading, then the Cr loading pattern A is separated into two parts B and C, such that pattern B meets Cr loading requirements, after which pattern B is applied to a first

exposure process and pattern C is applied for a second exposure process.

2. The method of claim 1, wherein the defining etch recipes for etching an opaque material comprises a range of fixed pattern loading of 20%, 50% and 80%.

3. A method for the creation of a pattern of opaque material over the substrate of a photolithographic exposure mask, comprising:

providing a CD performance criteria;

accessing a product pattern to be created in an opaque layer of an exposure mask;

determining a surface area of the product pattern;

determining, based in the accessed product pattern, a Cr loading factor over the substrate of the photolithographic exposure mask;

accessing an etch recipe of the opaque layer of an exposure mask, the etch recipe meeting Critical Diameter (CD) performance criteria for the determined Cr loading factor, this etch recipe being valid for the calculated Cr loading factor or for a Cr loading factor that is within determined limits of the Cr loading factor;

if CD performance criteria is met by the accessed etch recipe, the etch of the opaque layer is performed;

if the CD performance criteria is not met by the accessed etch recipe, dummy patterns are added in a dummy area of the mask;

re-calculating the Cr loading factor, comprising the product pattern and the created dummy pattern;

accessing a new etch recipe of the opaque material, the new etch recipe meeting the CD performance criteria for the re-calculated Cr load factor;

etching, if CD performance criteria is met by the newly accessed etch recipe, the opaque material; and

returning, if CD performance criteria is not met by the newly accessed etch recipe, to the preceding step of determining, based in the accessed product pattern, a Cr loading factor over the substrate of the photolithographic exposure mask.

4. The method of claim 3, wherein the product pattern comprises exposure patterns, mask ID and mask alignment marks.

5. The method of claim 3, wherein the etch recipe is valid for the calculated Cr loading factor or for a Cr loading factor that is within determined limits of the Cr loading factor.

6. The method of claim 5, wherein the loading factor is within a range of 15-25%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 20%.

7. The method of claim 5, wherein the loading factor is within a range of 40-60%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 50%.

8. The method of claim 5, wherein the loading factor is within a range of 70-90%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 80%.

9. A method for the creation of a pattern of opaque material over the substrate of a photolithographic exposure mask, comprising:

determining several dry-etch recipes, whereby these several dry-etch recipes provide optimum CD performance for a number of different fixed pattern loading recipes such as 20%, 50% and 80%, said fixed pattern loading comprising forbidden surface areas;

calculating total Cr etch loading for a given product;

deriving, from the calculated total Cr etch loading a residue and useless area on the photolithographic mask;

determining a pattern of Cr etching by calculating a loading factor X, whereby X = (Cr etching area/total mask area)*100%, whereby 0% < X < 100%;

performing, for values of X = 20% and 50% and 80%, a first exposure;

if for standard Cr etch recipes of respectively A = 20%, B = 50% or C = 80%, if respectively values of X < 20% or < 50% or < 80%, determine if enough dummy pattern can be provided to meet the criteria of X + Y = 20% or 50% or 80%;

if the latter criteria can be met with the dummy pattern the second exposure is performed; and

separating, if the latter criteria cannot be met, the original patterns into pattern B and pattern C.

10. The method of claim 9, the forbidden area of the surface of the exposure mask being defined by a Scanner and by a Product Pattern.

11. The method of claim 9, whereby 0% < X < 100%, whereby X is defined as being 20%, 50%, 80% or as being 18%, 35%, 75%, this latter determination being dependent on performance of actual chrome etch recipes and actual product patterns.

12. The method of claim 9, whereby X + Y = [(Cr etching area + Y dummy etching areas)/total mask area]*100%, while Y = (Y dummy etching area/total mask areas)*100%, thereby providing for converting different Cr etch recipes for Cr etch loading products into fixed etch recipes of for instance 20% or 50% of 80%.

13. The method of claim 9, wherein pattern A = 39%, a C pattern being equal to 19%, by subtracting the C pattern (of 19%) from the A pattern (of 39%), a B pattern of 20% being obtained.

14. A system for creating a pattern in a layer of opaque material of a photolithographic exposure mask, comprising:

a means for defining an etch recipe for etching a product pattern A in an opaque material over a substrate of a photolithographic exposure mask that optimally meets Critical Diameter (CD) requirements of the product pattern, said etching a product pattern comprising a photoresist exposure mask;

a means for calculating the product pattern total Cr etch loading on the exposure mask;

a means for defining a residual or useless surface area of the exposure mask;

a means for, if the defined, optimum etch recipe meets the optimal Critical Diameter (CD) requirements, the exposure of the opaque material of the exposure mask is performed;

a means for, if the defined, optimum etch recipe does not meet the optimal Critical Diameter (CD) requirements, then the Cr etch loading is modified by adding dummy patterns in unused areas of the photoresist exposure mask;

a means for, if the addition of dummy pattern to the product pattern does not meet the Cr etch loading, then the Cr loading

pattern A is separated into two parts B and C, such that pattern B meets Cr loading requirements, after which pattern B is applied to a first exposure process and pattern C is applied for a second exposure process.

15. The system of claim 14, wherein the defining etch recipes for etching an opaque material comprises a range of fixed pattern loading of 20%, 50% and 80%.

16. A system for the creation of a pattern of opaque material over the substrate of a photolithographic exposure mask, comprising:

a means for providing a CD performance criteria;

a means for accessing a product pattern to be created in an opaque layer of an exposure mask;

a means for determining a surface area of the product pattern;

a means for determining, based in the accessed product pattern, a Cr loading factor over the substrate of the photolithographic exposure mask;

a means for accessing an etch recipe of the opaque layer of an exposure mask, the etch recipe meeting Critical Diameter (CD) performance criteria for the determined Cr loading factor, this etch recipe being valid for the calculated Cr loading factor or

for a Cr loading factor that is within determined limits of the Cr loading factor;

a means for, if CD performance criteria is met by the accessed etch recipe, the etch of the opaque layer is performed;

a means for, if the CD performance criteria is not met by the accessed etch recipe, dummy patterns are added in a dummy area of the mask;

a means for re-calculating the Cr loading factor, comprising the product pattern and the created dummy pattern;

a means for accessing a new etch recipe of the opaque material, the new etch recipe meeting the CD performance criteria for the re-calculated Cr load factor;

a means for etching, if CD performance criteria is met by the newly accessed etch recipe, the opaque material; and

a means for returning, if CD performance criteria is not met by the newly accessed etch recipe, to the preceding step of determining, based in the accessed product pattern, a Cr loading factor over the substrate of the photolithographic exposure mask.

17. The system of claim 16, wherein the product pattern comprises exposure patterns, mask ID and mask alignment marks.

18. The system of claim 16, wherein the etch recipe is valid for the calculated Cr loading factor or for a Cr loading factor that is within determined limits of the Cr loading factor.

19. The system of claim 18, wherein the loading factor is within a range of 15-25%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 20%.

20. The system of claim 18, wherein the loading factor is within a range of 40-60%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 50%.

21. The system of claim 18, wherein the loading factor is within a range of 70-90%, counting as Cr loading factors that closely resemble conditions for a Cr loading factor of 80%.

22. A system for the creation of a pattern of opaque material over the substrate of a photolithographic exposure mask, comprising:

a means for determining several dry-etch recipes, whereby these several dry-etch recipes provide optimum CD performance for a number of different fixed pattern loading recipes such as 20%, 50% and 80%, said fixed pattern loading comprising forbidden surface areas;

a means for calculating total Cr etch loading for a given product;

a means for deriving, from the calculated total Cr etch loading, a residue and useless area on the photolithographic mask;

a means for determining a pattern of Cr etching by calculating a loading factor X, whereby X = (Cr etching area/total mask area)*100%, whereby 0% < X < 100%;

a means for performing, for values of X = 20% and 50% and 80%, a first exposure;

a means for, if for standard Cr etch recipes of respectively A = 20%, B = 50% or C = 80% respectively values of X < 20% or < 50% or < 80% are obtained, determining if enough dummy pattern can be provided to meet the criteria of X + Y = 20% or 50% or 80%;

a means for, if the latter criteria can be met with the dummy pattern, performing a second exposure; and

a means for separating, if the latter criteria cannot be met, the original patterns into pattern B and pattern C.

23. The system of claim 22, the forbidden area of the surface of the exposure mask being defined by a Scanner and by a Product Pattern.

24. The system of claim 22, whereby 0% < X < 100%, whereby X is defined as being 20%, 50%, 80% or as being 18%, 35%, 75%, this latter determination being dependent on performance of actual chrome etch recipes and actual product patterns.

25. The system of claim 22, whereby X + Y = [(Cr etching area + Y dummy etching areas)/total mask area]*100%, while Y = (Y dummy etching area/total mask areas)*100%, thereby providing for converting different Cr etch recipes for Cr etch loading products into fixed etch recipes of for instance 20% or 50% of 80%.\

26. The system of claim 22, wherein pattern A = 39%, a C pattern being equal to 19%, by subtracting the C pattern (of 19%) from the A pattern (of 39%), a B pattern of 20% being obtained.